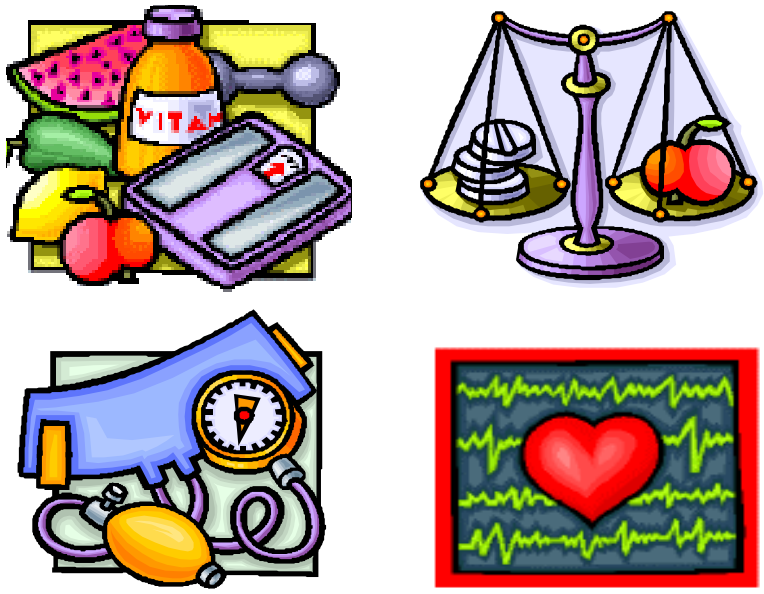
VIRGINIA DEPARTMENT OF HEALTH
OFFICE OF FAMILY HEALTH SERVICES

CHRONIC DISEASE PREVENTION AND CONTROL IN VIRGINIA

DATA HIGHLIGHTS



PUBLISHED BY THE DIVISION OF CHRONIC DISEASE PREVENTION AND CONTROL

Chronic Disease Prevention You Can
DIVISION OF CHRONIC DISEASE PREVENTION AND CONTROL

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The purpose of this publication is to highlight the critical aspects of chronic diseases in Virginia. Please refer to "Chronic Disease in Virginia: A Statistical Report by The Chronic Disease Prevention Program" for expanded chronic disease data and information. The report is available on the web at www.vahealth.org/pubs.htm, or by request from Ramona Dawn Schaeffer, Director, Division of Chronic Disease Prevention and Control, P.O. Box 2448, Richmond, VA 23218.

Currently, more than 90 million Americans live with chronic illnesses.

The National Center for Chronic Disease Prevention and Health Promotion defines chronic disease as those illnesses that are prolonged, preventable, do not resolve spontaneously, are rarely cured completely, and that pose a significant burden in mortality, morbidity, and cost. Almost every American family is adversely affected by chronic diseases – through the death of loved ones; through family members living with long-term illness, disability, and diminished quality of life; and, in many cases, through the massive financial burden wrought by these diseases. Chronic diseases account for one third of the years of potential life lost before age 65, for 70% of all deaths in the United States, and for more than 60% of the nation's medical care costs.

The impact of chronic disease on Virginians, both now and in the future, is profound. Four chronic diseases are among the top ten leading causes of death in Virginia: heart disease, cancer, cerebrovascular disease, and diabetes. Chronic conditions such as arthritis and chronic joint symptoms are responsible for a substantial amount of morbidity, activity limitation and health care costs.

ARTHRITIS

85% of total hip replacements and over 90% of knee, shoulder, and ankle replacements are due to complications of arthritis.

Disabilities from arthritis and related conditions create enormous costs for individuals, their families, and Virginia. Arthritis is the leading cause of disability in Virginia, limiting every day activity for more than 1.6 million adults. Arthritis affects sufferers 1) physically, through pain and restricted movement, 2) psychologically, through depression, stress and anxiety, and 3) socially, through decreased community involvement, difficulties in school, and sexual problems.

- In 1999, there were 15,833 hospitalizations in Virginia with arthritis as a primary diagnosis.
- In 2000, total arthritis hospitalization charges exceeded $267,000,000.
- The total number of hospitalized days exceeded 72,000 – the equivalent of almost 200 years.

The impact of arthritis is expected to increase dramatically as "baby boomers" age, affecting almost 20% of the national population by 2020. A 2000 Behavioral Risk Factor Surveillance (BRFSS) analysis revealed the following arthritis prevalence data for Virginians who participated in the survey:

- 31% of adult respondents have arthritis.
- Older respondents are more commonly affected by arthritis - prevalence increases with age, rising from 20% among those 18-44 years old, to 55% among those 65 years and older.
- Though arthritis affects both genders, women are more likely to have this condition than men - among surveyed females, 34% have arthritis, compared to 28% of men.
- Arthritis affects all race and ethnic groups; however, whites (33% of respondents) are more likely to have arthritis than blacks (28% of respondents).
- Arthritis is more common among people with less education – 44-58% of respondents with a 12th grade education have arthritis compared to 27-33% who have a 12th grade education or greater.

ASTHMA

Asthma is the leading cause of school absenteeism attributed to chronic conditions - 10 million days of school are missed annually due to asthma-related conditions.

Asthma is a chronic condition with acute exacerbations and can be life-threatening if not properly managed. It is the leading serious chronic illness among children. Nationally, it is estimated that 24.7 million people have been diagnosed with asthma by a health professional; more than a third of them (at least 7.7 million) are children under 18 years of age. In 1999, 3.8 million children (out of the 7.7 million) had an asthma episode. For some children the illness becomes a formidable problem causing numerous

visits to the hospital emergency room and multiple hospitalizations.

In the United States:

- Asthma is the number one cause of hospitalization among children under the age of 15 and it is the first-ranking chronic condition.
- There were close to 658,000 pediatric emergency room visits in 1999 due to asthma. The estimated annual rate for emergency room visits among children under age 5 is 137.1 per 10,000--the highest rate of all age groups.
- The estimated annual cost of treating asthma in those less than 18 years of age is $3.2 billion.

According to the 2001 Virginia Asthma Coalition descriptive analysis of 1998 and 1999 hospitalizations for asthma:

- Hospital charges for asthma in 1999 totaled $63,231,983 - a 16.4% increase from 1998.
- The rate of hospitalization for asthma for blacks in 1999 was nearly three times as high as the rate for whites.
- The age group with the highest rate of asthma hospitalization was pre-school children, age 0-4, at 47.1 per 10,000.
- School age children had a 13.2% hospitalization rate increase over 1998.
- The age group 60 and older also had a 13% hospitalization rate increase over 1998.
- The average charges per hospitalization for asthma in 1999 increased with increasing age.
- The average length of stay for a hospitalization for asthma in 1999 increased with increasing age.

CANCER

The total mortality rate from cancer in the United States has been declining over the last decade but has remained constant in Virginia.

Cancer has been the second leading cause of death in Virginia since 1950 - an estimated 13,300 Virginians died of cancer in 2001. Thousands more Virginias are at increased risk for developing cancer due to unhealthy behaviors. Scientific evidence suggests that about one-third of the nation's 553,400 cancer deaths in 2001 can be attributed to nutrition, physical activity, and other lifestyle factors and could also be prevented. Studies have shown that a decline in cancer rates can be directly attributed to prevention efforts and promotion of behavioral and environmental changes.

The American Cancer Society estimates positive dietary change, weight control, physical activity, and not smoking could prevent 60-70% of cancers in the United States. Additionally, the relative survival rate for breast, tongue, mouth, colon, rectum, cervix, prostate, testes, and skin cancers would increase from 80% to more than 95% if all Americans participated in regular cancer screenings. The American Cancer Society reports the following statistics for cancer in Virginia:

- In 1999, cancer accounted for 24% of all deaths.
- In 1999, rates of death from lung cancer were 102% higher among men than among women.
- As many as 13,500 Virginia residents will die of cancer in 2002.
- 31,300 new cases of cancer will be diagnosed in 2002, including 4,200 new cases of lung cancer, 3,500 new cases of colorectal cancer, and 5,000 new cases of breast cancer in women.

CARDIOVASCULAR HEALTH

Cardiovascular disease is commonly associated with older Americans but one in every six people who die from cardiovascular disease is under 65.

Heart disease and stroke - the principal components of cardiovascular disease - are the first and third leading causes of death in the United States, accounting for more than 40% of all deaths. About 950,000 Americans die of cardiovascular disease each year, which amounts to one death every 33 seconds. A consideration

of deaths alone understates the burden of cardiovascular disease - about 61 million Americans (almost one-fourth of the population) live with a cardiovascular illness. Heart disease is a leading cause of disability among working adults and stroke alone accounts for disability among more than 1 million Americans. Almost 6 million hospitalizations each year are due to cardiovascular disease.

Although cardiovascular disease is often thought to primarily affect men and older people, it is a major killer of women and people in the prime of life. More than half of all cardiovascular disease deaths each year occur among women. In Virginia, 2000 BRFSS surveillance data indicate that the population under the age of 65 is at significant risk for developing or dying from cardiovascular disease:

- 50% of respondents who were told by a doctor that they had a heart attack or myocardial infarction were under age 65.
- 30% of respondents who were told by a doctor that they had a stroke were under age 65.

Virginia Vital Statistics data show these significant cardiovascular mortality findings related to the under-65 population and race:

- The black population under age 65 died at the highest rate from all cardiovascular diseases combined.
- Males in the "other" race category, 37% of coronary heart disease deaths occurred before age 65.
- Among black males, 34% of coronary heart disease deaths occurred before age 65.

DIABETES

In 1999, an estimated 253,040 adult Virginians had diabetes.

Although the above number is alarming, the Centers of Disease Control and Prevention estimates that for every two people diagnosed with diabetes *there is an additional person with undiagnosed diabetes, bringing the estimated total to 379,560*. Furthermore, this figure does not include any Virginians under the age of 20. Diabetes is a risk factor for many serious illnesses and complications, such as cardiovascular disease, lower extremity amputations, blindness and end-stage renal disease. These complications lead to increased hospitalization, decreased productivity, and premature death. Although diabetes is a common, serious, and costly disease, it is also controllable and even preventable. While public awareness about diabetes prevalence and complications has increased, the number of hospitalizations and deaths related to diabetes is only beginning to be realized.

According to 1999 Virginia hospitalization data:

- Persons with diabetes were nearly 8 times more likely than those without diabetes to be hospitalized for a major cardiovascular disease.
- $1.4 billion were charged for hospitalizations of diabetes as a primary or secondary diagnosis.
- Collectively, patients spent 1,772 years in Virginia hospitals for diabetes treatment.

Diabetes-related mortality data from 1995 through 1999 show that:

- 3 out of 10 diabetes-related deaths were due to diabetes as the primary cause.
- 7 out of 10 diabetes-related deaths were due to diabetes as a contributing cause.
- More diabetes-related deaths were due directly to major cardiovascular diseases (1,757) than were due directly to diabetes (1,476).
- Diabetes mortality rates: were higher in males than females, increased exponentially with age, were higher among blacks than whites at every age group, and have increased slightly.

Primary risk factors such as smoking, physical inactivity, and a diet high in fat and low in fiber (eating fewer than five fruits and vegetables a day) are responsible for over 50% of all chronic diseases.

Chronic disease does not happen randomly or just by chance. Although heredity and environment play a part, the leading causes of death in Virginia are perpetuated by a number of health-damaging behaviors or risk factors. These behaviors include lack of physical activity, poor nutrition, tobacco use, and under-use of known effective preventive health practices, such as cholesterol and blood pressure screenings. Many premature deaths and disabilities could be prevented through changes in lifestyle that facilitate healthy living.

UNHEALTHY EATING

Currently, almost 60% of U.S. adults are overweight or obese.*

There is a well-established association between poor dietary habits and the leading causes of death in the United States. Diets high in total fat, saturated fat, cholesterol, and sodium and low in fiber and calcium are associated with a variety of chronic diseases and conditions, which include coronary heart disease, some types of cancer, type 2 diabetes, stroke, high blood pressure, high blood cholesterol, obesity, and osteoporosis. These diseases and conditions are major causes of death and disability and reduce the quality of life.

Obesity has reached epidemic proportions. In the past 15 years, the prevalence of obesity has increased by more than 50% among adults and 100% in children and adolescents. Ten to 15% of children and adolescents are overweight and more than half of these children have at least one cardiovascular disease risk factor, such as elevated cholesterol and hypertension. Overweight and obesity also contribute to a variety of diseases, including heart disease, diabetes, and cancer. The cost of diseases associated with obesity has been estimated at almost $100 billion per year.

Improving the American diet could extend productive life span and reduce the occurrence of chronic diseases. The National Cancer Institute attributes 35% of all cancer deaths in the U.S. to diets that are high in fat and low in fruit, vegetables and fiber. Eating a diet high in fruits and vegetables may also reduce the risk of heart disease by 20-40%.

In 2000, Virginia BRFSS trends paralleled the national trends for unhealthy diet and incidence of overweight and obesity:

- 80% of surveyed men and 70% of surveyed women reported eating fewer than five servings of fruits and vegetables per day.
- 56.1% of adult respondents were either overweight or obese based on self-reported height and weight.
- According to self-reported height and weight, 69% of black, 54% of white, 53% of Hispanic, and 37% of Asians/Pacific Islander respondents were overweight.

* Overweight is classified for adults as body mass index (BMI) >25kg/m² and obesity as a BMI of >30 kg/m2.

PHYSICAL INACTIVITY

25% of Virginia adults reported that they had not engaged in any physical activity during the past month.

Low levels of physical activity contribute to poor health from heart disease, stroke, some cancers, and can contribute to symptoms of arthritis. Physical inactivity and unhealthy eating are two primary causes of obesity and are responsible for at least 300,000 preventable deaths in the United States each year. People who are usually inactive can improve their health and reduce their risk of developing or dying from heart disease, diabetes, high blood pressure, and colon cancer by becoming even moderately active on a regular basis. 2000 Virginia BRFSS data show that:

- No leisure-time physical activity was reported by 34% of Hispanics, 28% of blacks, 24% of whites, and 19% of Asians/Pacific Islanders respondents.
- A significantly higher proportion of surveyed females (27.9%) than males (21.9%) reported no physical activity.
- The prevalence of physical inactivity was greater in each successively older age group of respondents.

- The rate of physical inactivity was higher among Hispanics (34.3%) and blacks (28%) respondents than among whites (24.1) and Asians (20.4%).
- The higher the level of education, the lower the prevalence of physical inactivity: 48.7% of respondents with less than a high school education vs. 14.3% among those with a college education.
- The higher the annual income level, the lower the prevalence of physical inactivity: 40.9% of respondents in the less than $15,000 group vs. 14.6% in the $50,000 plus group.

SMOKING

Cigarette smoking is the single most preventable cause of premature death in the United States.

Smoking-related diseases claim an estimated 430,700 American lives each year. Smoking costs the United States approximately $97.2 billion each year in health-care costs and lost productivity. It is directly responsible for 87% of lung cancer cases and causes most cases of emphysema and chronic bronchitis. Research has shown that smoking cessation has major and immediate benefits for smokers of all ages, yet one-third of the nation's 45 million smokers try to quit unsuccessfully every year and the average smoker will attempt to quit seven times before achieving success. According to the Centers for Disease Control and Prevention:

- Approximately one-third of all tobacco users in this country will die prematurely because of their dependence on tobacco.
- 90% of adults who smoke started by age 21 and half of them had become regular smokers by their eighteenth birthday.
- An estimated 4.5 million adolescents smoke, and 3,000 teens begin smoking each day. Of these 3,000 young people, 1,000 will die from a disease caused by smoking.

In Virginia:

- In 2002, an estimated 503,332 Virginians will have lung disease.
- In 2001, 21.1% of all Virginians smoked, and 3.3% used smokeless tobacco.
- In 2000, 25% of blacks, 22% of Hispanics and Asians/Pacific Islanders, and 20% of whites in Virginia reported current cigarette smoking.

HIGH CHOLESTEROL AND LIPIDS

Over one half of adult Americans have cholesterol levels above the desired 200 mg/dL.

The risk of coronary heart disease rises as blood cholesterol levels increase. When other risk factors (such as high blood pressure, cigarette smoke, and unhealthy diet) are present, this risk increases even more. High blood cholesterol levels can be identified with regular screening and may be controlled through improvements in diet and physical activity level. 2000 Virginia BRFSS surveillance data revealed that:

- 32.1% of adult respondents who had their blood cholesterol checked reported that a health care professional had told them that they had high blood cholesterol.
- The reported rate of high blood cholesterol among respondents increased with increasing age: 10.9% in the 18-24 year age group to 48.8% in the 65 plus age group.
- The rates of high blood cholesterol were similar for male (32.7%) and female (31.5%) respondents.
- The rates decreased with increasing annual household income, from 38.1% among respondents in the <$15,000 group to 29.6% in the $50,000+ group.

HIGH BLOOD PRESSURE

2000 BRFSS data show that 25.4% of Virginia adults reported that a doctor or a health care professional had told them that they had high blood pressure.

High blood pressure increases the risk of stroke, heart attack, kidney failure and congestive heart failure. When high blood pressure exists with obesity, smoking, high blood cholesterol levels or diabetes, the risk of heart attack or stroke

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increases several times. Nationally, the percentage of adults reporting that they had high blood pressure increased from 22.9% in 1991 to 24.9% in 1999. High blood pressure is easily detectable and usually controllable with lifestyle modifications (such as exercise, reducing salt intake, stopping smoking, and weight loss) and/or medication.

In Virginia, 2000 BRFSS data show:

- The rate of diagnosed hypertension was higher among females (27.5%) than among males (23.2%).
- Hypertension was higher among blacks (30.4%) than among whites (25.8%).
- Blood pressure increased with increasing age, from 3.8% among 18-24 year olds to 53.6% among those 65 years and older.
- Blood pressure decreased with increasing education level, from 36.2% among those with less than a high school education to 21.8% among those with a college education.

ADDRESSING THE BURDEN

Chronic diseases have been the leading causes of morbidity and mortality in Virginia for most of the 20th century.

To ease the physical and financial burden of chronic diseases, it is important to examine their history, current impact on the health of Virginians, and the environmental and policy plans for future chronic disease relief. The Virginia Department of Health (VDH) has partnered with federal and state health agencies to develop programs that meet the state and community needs for chronic disease intervention.

The *Division of Chronic Disease Prevention and Control* is focused on reducing the morbidity and mortality of major chronic diseases in Virginia. The Division: evaluates the environmental and policy issues that affect chronic disease status; encourages healthy lifestyles; addresses risk factors through data reports, media campaigns, and public and professional training; and collaborates with individual disease prevention projects within the Division.

The *Virginia Diabetes Control Project* (VDCP) works to reduce the number of deaths due to diabetes and the number of disabilities and complications associated with diabetes. The major goals of the project are to increase prevention of diabetes, increase diabetes self-management, and reduce health disparities among people with diabetes. The project is funded by the Centers for Disease Control and Prevention and administered by the Virginia Department of Health. For additional VDCP information, see www.vahealth.org/diabetes/index.htm.

VDH has partnered with the Virginia Chapter of the Arthritis Foundation, Centers for Disease Control and Prevention (CDC) and other allied agencies to form the *Virginia Arthritis Project* (VAP). VAP aims to improve the quality of life of persons with arthritis, decrease the occurrence of arthritis, and address arthritis as a public health issue. For additional VAP information, see www.vahealth.org/arthritis/index.htm.

The *Virginia Asthma Control Project* (VACP) is working with the *Virginia Asthma Coalition* to reduce illness and death due to asthma among Virginia's citizens. The project goals are being realized through: the promotion of asthma management and control; accurate and ongoing needs assessments; effective dissemination of data and prevention information; promotion of culturally sensitive, educationally-appropriate materials; education and interventions; program evaluations; and collaborative use of available resources.

In January 1998, the *Comprehensive Cancer Prevention and Control Project* (CPCP) was established within the Division of Chronic Disease Prevention and Control. A diverse network of partnerships has been formed to address comprehensive cancer control, implement cancer control health communications campaigns, and implement Virginia Cancer Plan priority strategies. VDH has received CDC funding to further the

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efforts of cancer prevention and control. This work is done in collaboration with the Cancer Plan Action Committee (CPAC), a partnership that furthers the efforts of cancer prevention and control by addressing disparities among minorities, encouraging and promoting early detection practices, and encouraging the use of tobacco use control educational materials in K-12 school curricula. For additional CPCP information, see www.vahealth.org/cancerprevention/index.htm.

The *Virginia Cardiovascular Health Project* (VCVHP) seeks to lessen the burden of cardiovascular disease and improve the cardiovascular health of Virginians. It approaches these goals through changes in policy and the environment that promote the need for healthy eating habits and physical activity, encourage regular blood pressure and cholesterol screenings, and increase awareness of diabetes and other risk factors for CVD throughout the state. For additional VCVHP information, see www.vahealth.org/cvd/index.htm.

The *Tobacco Use Control Project* (TUCP) provides training, information, materials and other support to help Virginians choose and maintain tobacco-free lifestyles. TUCP focuses on projects designed to prevent youth tobacco use, reduce secondhand tobacco smoke, and encourage tobacco cessation. VDH staff work closely with 17 volunteer coalitions, school districts, and volunteer partners. Funding is provided through a grant from the Centers for Disease Control and Prevention. For additional TUCP information, see www.vahealth.org/tobaccocontrol/index.htm.

VDH is working to build the *Health Promotion for People with Disabilities* (HPPD) project to address secondary condition (e.g. chronic disease) prevention and promotion of health among people with disabilities. The project will develop state and community partnerships as well as a state plan of action to meet the needs of Virginians with disabilities.

For information on these and other public health programs that focus on strengthening the health of families and communities, please visit the Virginia Department of Health's Office of Family Health Services web site at www.vahealth.org.

DATA SOURCES

The data used in this publication are systemically gathered information, not necessarily numeric, that describe the relationship of a specific population to a specific risk factor or disease. Calculated statistics provide information about how extensively a disease affects a population, who is at risk of dying from a disease, or whether the rate of exposure to a risk factor is increasing or decreasing. The sources of chronic disease data for this publication include the following: *Behavioral Risk Factor Surveillance System* (BRFSS): BRFSS is a state-level annual phone survey of un-institutionalized adults (18 years or older). The information is used to estimate prevalence of chronic disease, health status, and related risk factors; as baseline data; and for the evaluation of large-scale health programs. www.cdc.gov/nccdphp/brfss

Virginia Hospital Information (VHI): VHI provides a dataset of every hospital discharge in Virginia. The dataset describes medical care by specific disease or procedure, calculates trends in charges and length of stay, and calculates annual expenditures for specific diagnoses or procedures. www.vhi.org/

Office of Vital Statistics: The Vital Statistics database maintains Virginia births, deaths, marriages, population estimates, and communicable diseases data. The information is used to establish and compare mortality rates. www.vdh.state.va.us/

Virginia Center for Health Statistics (VCHS): VCHS collects, analyzes and disseminates population-based health data. Data are collected via vital records, using survey, and through partnerships with other public and private entities. www.vdh.state.va.us/stats/index.htm

Virginia Cancer Registry (VCR): Data from the VCR provide a description of the cancer burden in Virginia. This information is used as a basis for program planning, cancer research, education about cancer risk factors and screening recommendations, and for assisting the public with cancer inquiries. www.vdh.state.va.us/epi/cancer/index.htm

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